



Meeting Employment Needs in Iowa

The Registered Apprenticeship Model



The Problem - Fix

- Over next decade, 3-1/2 million manufacturing jobs need to be filled
- Skills gap expected to result in 2 million of those jobs going unfilled
- 82% - skills gap will impact ability to meet customer demand
- 78% - skills gap will impact ability to implement new technology
- 90% - moderate to severe shortage of skilled production employees

Source: “*The skills gap in US manufacturing 2015 and beyond*”, Deloitte and Manufacturing Institute

The Solution

Find better ways to prepare the workforce to fill skilled jobs.

The Partners

- Regional Apprenticeship Sponsor (Career Academy of Pella)
- Participating Employers
- Participating School Districts
- Community Colleges
- AEA Online
- Iowa Department of Labor
- Iowa Department of Education
- Iowa Workforce Development
- Iowa Governor's STEM Advisory Council

In alignment with the Future Ready Iowa Initiative

The Plan - High School Registered Apprenticeships

Model:

- Identify skills necessary to be successful in specific careers
- Develop a pathway that ensures the development of those skills
 - Academic competencies
 - Job site competencies
- Market the pathway to students

The Picture

- Freshman and sophomore - Core and elective courses
- Junior - Core and apprentice training courses
- Summer - Initial employment/training
- Senior - 1/2 classroom (core and elective) and 1/2 employment
- Post-graduation - One year of employment



Career Academy of Pella Apprenticeship Details

9th Grade (A minimum of 7 classes required per semester)

	Semester 1	Semester 2
Required Core Academic Skill Courses	<p>Core Math 1 or Math 1</p> <p>English 9 or English 9 Honors</p> <p>Physical Science</p> <p>American History or <i>American History AP*</i></p>	<p>Core Math 1 or Math 1</p> <p>English 9 or English 9 Honors</p> <p>Physical Science</p> <p>American History or <i>American History AP*</i></p>
Required Electives	PE	
Required Electives for Apprenticeships		
Suggested Electives	<p>Exploring Industrial Technology</p> <p>Spanish 1</p> <p>Robotics 1</p>	<p>Fundamentals of Construction</p> <p>Spanish 1</p>

10th Grade (A minimum of 7 classes required per semester)

	Semester 1	Semester 2
Required Core Academic Skill Courses	Core Math 2 or Math 2 English 10 or English 10 Honors Chemistry World Geography or <i>Human Geography AP*</i>	Core Math 2 or Math 2 English 10 or English 10 Honors Chemistry World Geography or <i>Human Geography AP*</i>
Required Electives	PE	
Required Electives for Apprenticeships	Metal Design & Marketing	Health/CPR
Suggested Electives	Spanish 2 Robotics 2	Spanish 2 Fundamentals of Welding

11th Grade (A minimum of 6 classes required per semester)

	Semester 1	Semester 2
Required Core Academic Skill Courses	<p>Core Math 3 or Math 3</p> <p>English 11 or <i>College American Literature to 1865*</i></p> <p>Biology</p> <p>World History or <i>Western Civilizations 1*</i></p>	<p>Core Math 3 or Math 3</p> <p>English 11 or <i>College American Literature since 1865*</i></p> <p>Biology</p> <p>World History or <i>Western Civilizations 2*</i></p>
Required Electives	PE	
Required Electives for Apprenticeships	<i>Welding 1* - (2 High School Credits)</i>	<p><i>Welding 2* - (2 High School Credits)</i></p> <p><i>Care of/Use of Hand/Power Tools*</i></p>
Suggested Electives	<p>Psychology</p> <p>Introduction to Engineering & Design</p>	<p><i>Introduction to Psychology*</i></p> <p>Introduction to Engineering & Design</p>

12th Grade (A minimum of 6 classes required per semester)

	Semester 1	Semester 2
Required Core Academic Skill Courses	<i>Communication Skills*</i>	<i>American Government or American Government AP*</i>
Required Electives	PE	
Required Electives for Apprenticeships		Financial Literacy
Suggested Electives	Business Principles & Ownership <i>Statistics*</i>	<i>Oral Communication*</i>
Workplace Training	<i>Metal Work-Workplace Experience* (3 High School Credits)</i>	<i>Metal Work-Workplace Experience* (3 High School Credits)</i>

11th Grade (A minimum of 6 classes required per semester)

	Semester 1	Semester 2
Required Core Academic Skill Courses	<p>Core Math 3 or Math 3</p> <p>English 11 or <i>College American Literature to 1865*</i></p> <p>Biology</p> <p>World History or <i>Western Civilizations 1*</i></p>	<p>Core Math 3 or Math 3</p> <p>English 11 or <i>College American Literature since 1865*</i></p> <p>Biology</p> <p>World History or <i>Western Civilizations 2*</i></p>
Required Electives	PE	
Required Electives for Apprenticeships	<i>Welding 1* - (2 High School Credits)</i>	<p><i>Welding 2* - (2 High School Credits)</i></p> <p><i>Care of/Use of Hand/Power Tools*</i></p>
Suggested Electives	<p>Psychology</p> <p>Introduction to Engineering & Design</p>	<p><i>Introduction to Psychology*</i></p> <p>Introduction to Engineering & Design</p>

12th Grade (A minimum of 6 classes required per semester)

	Semester 1	Semester 2
Required Core Academic Skill Courses	<i>Communication Skills*</i>	<i>American Government or American Government AP*</i>
Required Electives	PE	
Required Electives for Apprenticeships		Financial Literacy
Suggested Electives	Business Principles & Ownership <i>Statistics*</i>	<i>Oral Communication*</i>
Workplace Training	<i>Metal Work-Workplace Experience* (3 High School Credits)</i>	<i>Metal Work-Workplace Experience* (3 High School Credits)</i>

Workplace Requirements

	Summer	Semester 1	Semester 2	Post Secondary
Following 11th Grade	8 weeks of 40 hours per week on the worksite			
12th Grade		4 hours per day on the worksite	4 hours per day on the worksite	
Post Secondary				40 hours per week on the worksite for a year

DMACC Associate of General Studies Degree

# of Credits	Course
~42	Completion of Apprenticeship (Electives)
1	Power Tools (Electives)
3	Communication Skills (Communications)
6	Welding 1 (Electives)
4	Welding 2 (Electives)
3	Intro to Psychology (Social and Behavioral Sciences/Humanities)
4	Statistics or DMACC online course (Math/Science)
3	Distributed Requirement (IED, Oral Communication, Elementary Spanish 1)

The Product

- High School Diploma
- National Career Readiness Certification
- American Welding Society Certification
- Apprenticeship Certificate
- Associate of General Studies Degree (optional)
- Career Readiness / Employment

Program Opportunities

Areas being pursued:

- Welding (2018-19 school year)
- Engineering Technician (Researching)
- Certified Nursing Assistant (2019-20 school year)
- Culinary Arts (2019-20 school year)

The Future

Increase...

- available labor force
- opportunities for business to thrive and expand
- opportunities for people to live and work in Iowa
- economic development



Questions?



Thank you for your support!